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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,880	08/22/2003	Takashi Abe	970.1007	8652
21171	7590	03/08/2005	EXAMINER	
STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			KOVAL, MELISSA J	
			ART UNIT	PAPER NUMBER
			2851	

DATE MAILED: 03/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,880

Applicant(s)

ABE ET AL.

Examiner

Melissa J. Koval

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
4a) Of the above claim(s) 11-14 and 21-23 is/are withdrawn from consideration.
5) ☐ Claim(s) 10 and 15-20 is/are allowed.
6) ☒ Claim(s) 1-3 and 5-9 is/are rejected.
7) ☒ Claim(s) 4 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date June 23, 2004.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of Group I, Embodiment I of claims 1-10, 15 and 16-20 in the reply filed on December 3, 2004 is acknowledged.

Claims 11-14 and 21-23 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on December 03, 2004.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishii et al. ('572).

See Figure 1 of ' 572, for example.

Claim 1 sets forth: "A transmission screen comprising (See column 4, lines 61 through 67.):

a Fresnel lens sheet through which light is projected from a projector (See column 4, line 62.);

the lenticular lens sheet receiving light as approximately parallel light, passing through the Fresnel lens sheet, and emitting the approximately parallel light while horizontally widening, by means of a group of cylindrical lenses which are horizontally in parallel (See column 2, lines 33 through 46.),

wherein in at least one of the Fresnel lens sheet and the lenticular lens sheet, on a surface of a light diffusing substrate, in which a light diffusing material is dispersed, irregularities which constitute a lens section are formed (See Figure 1.), and

in the light diffusing substrate, dispersion density of the light diffusing material differs in at least two layers in the thickness direction (See column 6, lines 21 through 32, and thicknesses t_1 and t_2 . Also see column 6, lines 38 through 67 and column 7, lines 1 through 6, with respect to density of the particles comprised by layers 11 and 12.)”

Claim 2 sets forth: “A transmission screen according to claim 1, wherein the light diffusing substrate is spread formed with ink containing the light diffusing material on at least one surface of a resin sheet extrusion formed with the light diffusing material mixed therein.” See column 1, line 50. See Park U.S. Patent 6,275,334 B1 in the references cited, but not applied, below.

Claim 3 sets forth: “A transmission screen according to claim 1, wherein the light diffusing substrate has laminated on the surface of the resin sheet extrusion formed with the light diffusing material mixed therein, another resin sheet extrusion formed with a different density of the light diffusing material mixed therein.” See column 8, lines 12 through 36, and particularly the phrase “between rolls” in line 19. Also see the definition

of the word "laminate" given in "Merriam-Webster's Collegiate Dictionary, Tenth Edition" listed in the references cited, but not applied, below.

Claim 5 sets forth: "A transmission screen according to claim 1, wherein the dispersion density of the light diffusing material is higher on the side of the projector than on the viewer side." See column 5, lines 62 through 65, and column 7, lines 3 through 6.

With respect to claims 6 and 7, see column 8, lines 48 through 59 wherein organic material polymethyl methacrylate is described in line 50 and inorganic particles are described in lines 53 and 54.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al. ('572) in view of Hirata et al. ('308).

Claim 8 sets forth: " A transmission screen according to claim 1, wherein the surface on the viewer side of the light diffusing substrate, is performed to at least one surface treatment selected from hard coat treatment, antistatic treatment, and antireflection treatment."

Claim 9 sets forth: "A transmission screen according to claim 1, wherein the surface on the viewer side of the resin sheet extrusion formed with the light diffusing

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material mixed therein, is performed to at least one surface treatment selected from hard coat treatment, antistatic treatment, and antireflection treatment.”

Ishii et al. ('572) show all of the elements of claims 8 and 9 except that a surface treatment for the viewer side of the transmission screen is not particularly discussed. However surface treatments are well known in the art for screens comprising both a Fresnel lens and a lenticular sheet or sheets with diffusion particles. See the FIELD OF THE INVENTION of '308.

See column 37, lines 27 through 40, and column 40, lines 46 through 57.

It is an object of both the inventions of Ishii et al. ('572) and Hirata et al. ('308) to improve viewing characteristics of the screen for the viewer such as improving brightness and contrast and reducing moiré. Both the inventions of Ishii et al. ('572) and Hirata et al. ('308) are analogous and therefore the invention of Ishii et al. ('572) can be adapted to include a surface treatment as taught by Hirata et al. ('308).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make use of an antireflection surface treatment to reduce glare, an antistatic treatment to reduce dust, or a hardening treatment to reduce damage to the exit or viewing side of the screen as shown by Hirata et al. (308). The motivation for one having ordinary skill in the art to make such a modification would be to reduce glare and to reduce reflection of ambient images and ambient light, reduce dust on the surface of the screen to improve contrast, and harden the surface to prevent physical damage to the screen all for the benefit of the viewer.

Allowable Subject Matter

Claims 10 and 15-20 are allowed.

Claims 4 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 4 sets forth: "A transmission screen according to claim 1, wherein on one surface of a transparent resin substrate which does not contain the light diffusing material, at least two layers of resin layers containing the light diffusing material is laminated."

The following is a statement of reasons for the indication of allowable subject matter:

Each and every limitation of claim 4 distinguishes the claim over the prior art of record.

With respect to claim 10, the prior art of record neither shows nor suggests a transmission screen comprising all of the elements of claim 10 in combination, and particularly " wherein in the Fresnel lens sheet on one surface of a light diffusing substrate, in which a light diffusing material is dispersed, irregularities which constitute a lens section including a reacted product of a radioactive-ray-curable-resin is formed, and on the other surface, irregularities which constitute a lens section which light is vertically widened and projected from the projector is formed, by means of a group of the cylindrical lenses which are vertically in parallel, and

in the lenticular lens sheet, on one surface of a substrate on the Fresnel lens sheet side, the group of cylindrical lenses which are horizontally in parallel is formed by a reacted product of a radioactive-ray-curable-resin, and on the other surface, at a position corresponding to the boundaries of the cylindrical lenses, a stripe-shaped shading layer is formed, and

a light diffusing substrate made by laminating at least two layers of resin layers containing the light diffusing material on one surface of a transparent resin substrate which does not contain the light diffusing material, is laminated so that the side which does not contain the light diffusing material faces to the shading layer side”.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Park U.S. Patent 6,275,334 B1 teaches a projector screen having an improved horizontal view angle. Column 3, lines 16 through 19 discuss a lenticular lens comprising black stripe formed by black ink.

Moshfrefzadeh et al. U.S. Patent 6,624,943 B1 teaches a projection screen using variable power lenticular lens for asymmetric viewing angle.

Merriam-Webster's Collegiate Dictionary Tenth Edition, copyright 2001, page 651: “lamine 1: to roll or compress into a thin plate”.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa J. Koval whose telephone number is (571) 272-2121. The examiner can normally be reached on Monday through Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on (571) 272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MJK



Handwritten signature of Melissa Jan Koval.